WHAT IS CLAIMED IS:

1.    An information handling system comprising:

    a hub;

    a multimedia server coupled to the hub;

    a telephony device coupled to the hub; and

    a first network device coupled to the hub through the telephony device,
wherein the telephony device includes circuitry for throttling data sent from the first
network device.

2.    The system as recited in claim 1, further comprising:

    a second network device coupled to the hub, wherein the data sent from the
first network device is addressed for transmission to the second network device.

3.    The system as recited in claim 2, wherein the hub, multimedia server, second
network device, telephony device, and first network device are coupled to each other
via a network.

4.    The system as recited in claim 3, wherein the network is a TCP/IP network.

5.    The system as recited in claim 4, wherein the network is a packet switched
network.

1    6.    The system as recited in claim 3, wherein the telephony device and

2    multimedia server communicate using an IP protocol.

1    7.    The system as recited in claim 1, wherein the throttling circuitry reduces a

2    future amount of data from being transferred from the first network device if the

3    amount of data exceeds a predetermined threshold.

1    8.    The system as recited in claim 1, wherein the telephony device includes

2    circuitry for monitoring an amount of data addressed to and received by the telephony

3    device, wherein the throttling circuitry reduces a future amount of data from being

4    transferred from the first network device if the amount of data addressed to and

5    received by the telephony device falls below a predetermined threshold.

1    9.    The system as recited in claim 8, wherein the monitoring circuitry comprises a

2    jitter buffer where the predetermined threshold is a predetermined level within the

3    jitter buffer.

1    10.    The system as recited in claim 8, wherein the monitoring circuitry further

2    comprises circuitry for sending a congestion message to the multimedia server when

3    the amount of data addressed to and received by the telephony device falls below the

4    predetermined threshold.

1      11.    The system as recited in claim 10, wherein the multimedia server further

2      comprises circuitry for sending a throttling signal to the telephony device in response

3      to receipt of the congestion message from the monitoring circuitry.

1      12.    The system as recited in claim 11, wherein the throttling circuitry in the

2      telephony device throttles the future amount of data sent from the first network device

3      in response to receipt of the throttling signal.

1      13.    The system as recited in claim 12, wherein the throttling signal includes a

2      mode level in which the throttling circuitry should operate.

1      14.    The system as recited in claim 13, wherein the throttling circuitry adjusts its

2      level of throttling of the data in response to the mode level included in the throttling

3      signal.

1      15.    The system as recited in claim 14, wherein the mode level is a most aggressive

2      mode, wherein the throttling circuitry will throttle the future amount of data sent from

3      the first network device at a highest level in response to the mode level being in the

4      most aggressive mode.

1      16.    The system as recited in claim 15, wherein the sending circuitry in the

2      multimedia server will designate the mode level at the most aggressive mode as long

3      as the congestion message is received from any telephony device coupled to the

4      multimedia server within a specified time period.

17. The system as recited in claim 16, wherein the throttling signal will switch to a least aggressive mode if the congestion message is not received from any telephony device coupled to the multimedia server within the specified time period.

18. The system as recited in claim 17, wherein the throttling circuitry will throttle the future amount of data sent from the first network device at a level lower than the highest level in response to the mode level being in the least aggressive mode.

19. The system as recited in claim 18, wherein the throttling signal will contain a signal to stop the throttling of the future amount of data if the congestion message is not received from any telephony device coupled to the multimedia server within the specified time period while the mode level has been in the least aggressive mode.

20. The system as recited in claim 19, further comprising another telephony device coupled between the hub and a second network device, wherein the telephony device also includes throttling circuitry for throttling a future amount of data sent from the second network device in response to receipt of the throttling signal.

21. The system as recited in claim 1, wherein the data sent from the first network device is sufficiently throttled so that the telephony device can communicate real-time multimedia signals to and from the multimedia server.

1      22.    The system as recited in claim 1, wherein the throttling results in no data being

2      sent from the first network device to the telephony device.

1      23.     An information handling system comprising:

2             a TCP/IP network;

3             a hub;

4             a multimedia server coupled to the hub via the TCP/IP network;

5             a first IP telephony device coupled to the hub via the TCP/IP network;

6             a first network device coupled to the first IP telephony device;

7             a second network device coupled to the hub via the TCP/IP network, wherein

8 data sent from the first network device is addressed for transmission to the second

9 network device and is transmitted through the first IP telephony device to the TCP/IP

10 network, wherein the first IP telephony device includes first circuitry for monitoring if

11 an amount of multimedia data being addressed to the IP telephony device and

12 received over the TCP/IP network falls below a first predetermined threshold,

13 wherein the first IP telephony device includes first circuitry for throttling the data sent

14 from the first network device in response to the first monitoring circuitry determining

15 that the amount of multimedia data being received by the first IP telephony device

16 over the TCP/IP network falls below the first predetermined threshold.

1      24.     The system as recited in claim 23, further comprising:

2             a second IP telephony device coupled to the hub via the TCP/IP network; and

3             a third network device coupled to the second IP telephony device, wherein

4 data sent from the third network device is addressed for transmission to the second

5 network device and is transmitted through the second IP telephony device to the

6 TCP/IP network,

7          wherein the second IP telephony device includes second circuitry for throttling

8          the data sent from the third network device in response to the first monitoring

9          circuitry determining that the amount of multimedia data being received by the first IP

10         telephony device over the TCP/IP network falls below the first predetermined

11         threshold.

1          25.     The system as recited in claim 24, wherein the first monitoring circuitry

2          further comprises first circuitry for sending a first congestion message to the

3          multimedia server over the TCP/IP network when the amount of multimedia data

4          being received by the first IP telephony device over the TCP/IP network falls below

5          the first predetermined threshold.

1          26.     The system as recited in claim 25, wherein the multimedia server further

2          comprises circuitry for sending a throttling signal to the first and second IP telephony

3          devices over the TCP/IP network in response to receipt of the first congestion

4          message from the first monitoring circuitry.

1          27.     The system as recited in claim 26, wherein the first throttling circuitry in the

2          first IP telephony device throttles the data sent from the first network device in

3          response to receipt of the throttling signal, wherein the second throttling circuitry in

4          the second IP telephony device throttles the data sent from the third network device in

5          response to receipt of the throttling signal.

1     28.     The system as recited in claim 27, wherein the throttling signal includes a

2     mode level in which the first and second throttling circuitries should operate.

1     29.     The system as recited in claim 28, wherein the first throttling circuitry adjusts

2     its level of throttling of the data in response to the mode level included in the

3     throttling signal, wherein the second throttling circuitry adjusts its level of throttling

4     of the data in response to the mode level included in the throttling signal.

1     30.     The system as recited in claim 29, wherein the mode level is a most aggressive

2     mode, wherein the first throttling circuitry will throttle the data sent from the first

3     network device at a highest level in response to the mode level being in the most

4     aggressive mode, wherein the second throttling circuitry will throttle the data sent

5     from the third network device at a highest level in response to the mode level being in

6     the most aggressive mode.

1     31.     The system as recited in claim 30, wherein the second IP telephony device

2     includes second circuitry for monitoring if a second amount of multimedia data being

3     received by the second IP telephony device over the TCP/IP network falls below a

4     second predetermined threshold, wherein the second monitoring circuitry further

5     comprises second circuitry for sending a second congestion message to the

6     multimedia server over the TCP/IP network when the second amount of multimedia

7     data being received by the second IP telephony device over the TCP/IP network falls

8     below the second predetermined threshold.

1  32.    The system as recited in claim 31, wherein the sending circuitry in the

2  multimedia server will designate the mode level at the most aggressive mode as long

3  as the first or second congestion messages are received within a specified time period.

1  33.    The system as recited in claim 31, wherein the throttling signal will switch to

2  a least aggressive mode if the congestion message is not received from any IP

3  telephony device coupled to the multimedia server within the specified time period.

1  34.    The system as recited in claim 32, wherein the throttling circuitry will throttle

2  the data sent from the second network device at a level lower than the highest level in

3  response to the mode level being in the least aggressive mode.

1  35.    The system as recited in claim 33, wherein the throttling signal will contain a

2  signal to stop the throttling of the data if the congestion message is not received from

3  any IP telephony device coupled to the multimedia server within the specified time

4  period while the mode level has been in the least aggressive mode.

1  36.    The system as recited in claim 34, wherein the multimedia data includes

2  real-time audio information.

1  37.    The system as recited in claim 23, wherein the data sent from the first network

2  device is sufficiently throttled so that the first IP telephony device can communicate

3  real-time signals to and from the multimedia server over the TCP/IP network.

1    38.    In an information handling system comprising a hub, a multimedia server

2    ("multimedia server") coupled to the hub, a telephone coupled to the hub, a

3    workstation coupled to the hub through the telephone, and a data server coupled to the

4    hub, a method comprising the steps of:

5        transferring data from the workstation to the telephone, wherein the data sent

6    from the workstation is addressed for transmission to the data server;

7        communicating audio information between the telephone and the multimedia

8    server; and

9        sufficiently throttling the data sent from the workstation to the telephone to

10    increase a rate of transfer of the audio information during the communicating step.

1    39.    The method as recited in claim 38, wherein the hub, multimedia server, data

2    server, telephone, and workstation are coupled to each other via a network.

1    40.    The method as recited in claim 39, wherein the network is a TCP/IP network.

1    41.    The method as recited in claim 39, wherein the network is a packet switched

2    network.

1    42.    The method as recited in claim 39, wherein the telephone and multimedia

2    server communicate using an IP protocol.

1    43.    The method as recited in claim 38, wherein the throttling step further

2    comprises the step of reducing a future amount of data from being transferred from

3    the workstation if the amount of data exceeds a predetermined threshold.

1    44.    The method as recited in claim 38, wherein the throttling step further

2    comprises the step of monitoring an amount of the audio information being received

3    by the telephone from the multimedia server.

1    45.    The method as recited in claim 44, wherein the monitoring step further

2    comprises the step of monitoring a predetermined level within a jitter buffer.

1    46.    The method as recited in claim 44, wherein the monitoring step further

2    comprises the step of the telephone sending a congestion message to the multimedia

3    server when the amount of the audio information falls below the predetermined level.

1    47.    The method as recited in claim 46, further comprising the step of the

2    multimedia server sending a throttling signal to the telephone in response to receipt of

3    the congestion message.

1    48.    The method as recited in claim 47, wherein the throttling step operates in

2    response to receipt of the throttling signal.

1    49.    The method as recited in claim 48, wherein the throttling signal includes a

2    mode level.

1    50.    The method as recited in claim 49, wherein the throttling step further

2    comprises the step of adjusting a level of throttling of the data in response to the mode

3    level included in the throttling signal.


1    51.    The method as recited in claim 50, wherein the step of the multimedia server

2    sending a throttling signal to the telephone in response to receipt of the congestion

3    message further comprises the step of setting the mode level to a most aggressive

4    mode, wherein the throttling step will throttle the future amount of data sent from the

5    workstation at a highest level in response to the mode level being in the most

6    aggressive mode.


1    52.    The method as recited in claim 51, wherein the setting step will designate the

2    mode level at the most aggressive mode as long as the congestion message is received

3    from any telephone coupled to the multimedia server within a specified time period.


1    53.    The method as recited in claim 52, wherein the step of the multimedia server

2    sending a throttling signal to the telephone in response to receipt of the congestion

3    message further comprises the step of setting the mode level to a least aggressive

4    mode if the congestion message is not received from any telephone coupled to the

5    multimedia server within the specified time period.

1  54.     The method as recited in claim 53, wherein the throttling step will throttle the

2  future amount of data sent from the workstation at a level lower than the highest level

3  in response to the mode level being in the least aggressive mode.

1  55.     The method as recited in claim 54, wherein the step of the multimedia server

2  sending a throttling signal to the telephone in response to receipt of the congestion

3  message further comprises the step of sending a message to stop the throttling of the

4  future amount of data if the congestion message is not received from any telephone

5  coupled to the multimedia server within the specified time period while the mode

6  level has been in the least aggressive mode.

1  56.     The method as recited in claim 38, wherein the throttling results in no data

2  being sent from the workstation to the telephone.

57. An IP telephony device comprising:

an input data port for receiving data, wherein the data is addressed for transmission to a location other than the IP telephony device;

circuitry for communicating information to and from the IP telephony device; and

circuitry for sufficiently throttling the data so that the communication of the information can be performed in real-time.

58. The IP telephony device as recited in claim 57, wherein the IP telephony device communicates the information using an IP protocol.

59. The IP telephony device as recited in claim 58, wherein the monitoring circuitry further comprises circuitry for sending a congestion message from a data output port when the amount of the information being received by the IP telephony device falls below a predetermined level.

60. The IP telephony device as recited in claim 59, wherein the throttling circuitry throttles the future amount of data received at the input data port in response to receipt of a throttling signal at the input data port, wherein the throttling signal is a function of the congestion message.

61. The IP telephony device as recited in claim 60, wherein the throttling signal includes a mode level in which the throttling circuitry should operate.

1      62.     The IP telephony device as recited in claim 61, wherein the throttling circuitry

2      adjusts its level of throttling of the data in response to the mode level included in the

3      throttling signal.

1      63.     The IP telephony device as recited in claim 62, wherein when the mode level

2      is a most aggressive mode, the throttling circuitry will throttle the future amount of

3      data at a highest level in response to the mode level being in the most aggressive

4      mode.

1      64.     The IP telephony device as recited in claim 63, wherein the throttling circuitry

2      will throttle the future amount of data sent from the workstation at a level lower than

3      the highest level in response to the mode level being in a least aggressive mode.

1      65.     The IP telephony device as recited in claim 57, further comprising:

2             a microphone;

3             a speaker; and

4             circuitry for communicating the audio information to the speaker and from the

5      microphone.

1      66.     The IP telephony device as recited in claim 60, further comprising:

2             a microphone;

3             a speaker; and

4             circuitry for communicating the audio information to the speaker and from the

5      microphone.

1    67.    A multimedia server comprising:

2    a network connection for connecting the multimedia server to a data network;

3    circuitry operable for communicating audio information with a telephone

4    connected to the data network;

5    circuitry operable for sending a throttling signal onto the data network in

6    response to receipt of a congestion message from the data network.

1    68.    The multimedia server as recited in claim 67, wherein the network is a TCP/IP

2    network.

1    69.    The multimedia server as recited in claim 67, wherein the network is a packet

2    switched network.

1    70.    The multimedia server as recited in claim 67, wherein the communicating

2    circuitry further comprises circuitry operable for communicating the audio

3    information using an IP protocol.

1    71.    The multimedia server as recited in claim 68, wherein the throttling signal

2    includes a mode level.

1    72.    The multimedia server as recited in claim 71, wherein the sending circuitry

2    will designate the mode level at a most aggressive mode as long as the congestion

3    message is received within a specified time period.

1  73.    The multimedia server as recited in claim 72, wherein the throttling signal will

2  switch to a least aggressive mode if the congestion message is not received within the

3  specified time period.

1  74.    The multimedia server as recited in claim 73, wherein the throttling signal will

2  contain a stop data throttling signal if the congestion message is not received within

3  the specified time period while the mode level has been in the least aggressive mode.

1  75.    The multimedia server as recited in claim 67, further comprising:

2          a peripheral card adaptable for coupling to a telecommunications network.

1  76.    The multimedia server as recited in claim 75, wherein the telecommunications

2  network is a public switched telephone network.

1  77.    The multimedia server as recited in claim 75, further comprising:

2          switching circuitry for communicating the audio information between the

3  network connection and the peripheral card.